



Nominal midband frequency kHz	Maximum difference between the free-field sensitivity level of a microphone system at normal incidence and the free-field sensitivity level at specified sound incidence angles dB				
	Sound Incidence angle degrees				
	30	60	90	120	150
0.05 to 1.6	0.5	0.5	1.0	1.0	1.0
2.0	0.5	0.5	1.0	1.0	1.0
2.5	0.5	0.5	1.0	1.5	1.5
3.15	0.5	1.0	1.5	2.0	2.0
4.0	0.5	1.0	2.0	2.5	2.5
5.0	0.5	1.5	2.5	3.0	3.0
6.3	1.0	2.0	3.0	4.0	4.0
8.0	1.5	2.5	4.0	5.5	5.5
10.0	2.0	3.5	5.5	6.5	7.5

Table A36-1 Microphone Directional Response Requirements**A36.3.6 Recording and reproducing systems.**

A36.3.6.1 A recording and reproducing system, such as a digital or analog magnetic tape recorder, a computer-based system or other permanent data storage device, must be used to store sound pressure signals for subsequent analysis. The sound produced by the aircraft must be recorded in such a way that a record of the complete acoustical signal is retained. The recording and reproducing systems must meet the specifications in sections A36.3.6.2 to A36.3.6.9 at the recording speeds and/or data sampling rates used for the noise certification tests. Conformance must be demonstrated for the frequency bandwidths and recording channels selected for the tests.

A36.3.6.2 The recording and reproducing systems must be calibrated as described in section A36.3.9.

(a) For aircraft noise signals for which the high frequency spectral levels decrease rapidly with increasing frequency, appropriate pre-emphasis and complementary de-emphasis networks may be included in the measurement system. If pre-emphasis is included,

over the range of nominal one-third octave midband frequencies from 800 Hz to 10 kHz inclusive, the electrical gain provided by the pre-emphasis network must not exceed 20 dB relative to the gain at 800 Hz.

A36.3.6.3 For steady sinusoidal electrical signals applied to the input of the entire measurement system including all parts of the microphone system except the microphone at a selected signal level within 5 dB of that corresponding to the calibration sound pressure level on the reference level range, the time-average signal level indicated by the readout device at any one-third octave nominal midband frequency from 50 Hz to 10 kHz inclusive must be within ± 1.5 dB of that at the calibration check frequency. The frequency response of a measurement system, which includes components that convert analog signals to digital form, must be within ± 0.3 dB of the response at 10 kHz over the frequency range from 10 kHz to 11.2 kHz.

NOTE: Microphone extension cables as configured in the field need not be included for the frequency response determination. This